

AMENDMENTS TO THE CLAIMS

Please cancel claims 26-28 and 30-33, without prejudice to pursuing these claims in a continuation or other application.

1. (Previously Presented) A system for processing microfeature workpieces, comprising:

- a vessel configured to carry a processing fluid, the vessel having a generally planar process location positioned to receive a microfeature workpiece;

- a workpiece support positioned to carry a microfeature workpiece at the process location of the vessel;

- a paddle chamber in fluid communication with the vessel, the paddle chamber having an opening at the process location to receive a microfeature workpiece, the paddle chamber having a base portion facing the process location and being spaced apart from the process location by a first distance along a first axis generally normal to the process location, the paddle chamber further having a plurality of sidewall portions extending downwardly away from the process location, at least one of the sidewall portions including a fluid entrance at least proximate to the process location, and at least one of the sidewall portions further including a fluid exit at least proximate to the process location; and

- a paddle device disposed in the paddle chamber, the paddle device having at least one paddle positioned between the fluid entrance and the fluid exit, wherein at least one of the workpiece support and the at least one paddle is movable along a generally linear second axis to agitate processing fluid at the process location while the workpiece support carries a microfeature workpiece.

2. (Previously Presented) The system of claim 1 wherein the at least one paddle extends for a second distance generally parallel to the first axis, the second distance being at least 30% of the first distance.

3. (Previously Presented) The system of claim 1 wherein the at least one paddle extends for a second distance generally parallel to the first axis, the second distance being at least 90% of the first distance.

4. (Cancelled)

5. (Original) The system of claim 1 wherein a gap between the process location and an upper extremity of the at least one paddle is about five millimeters or less.

6. (Original) The system of claim 1 wherein a gap between the base portion and a lower extremity of the at least one paddle is about five millimeters or less.

7. (Original) The system of claim 1 wherein a first gap between the process location and an upper extremity of the at least one paddle is about five millimeters or less, and wherein a second gap between the base and a lower extremity of the at least one paddle is about five millimeters or less.

8. (Original) The system of claim 1 wherein the at least one paddle is spaced apart from the process location by a first gap having a first gap dimension, and wherein the at least one paddle is spaced apart from the base portion by a second gap having a second gap dimension different than the first gap dimension.

9. (Original) The system of claim 1 wherein a distance between the base portion and the process location is less than about 30 millimeters.

10. (Original) The system of claim 1 wherein a distance between the base portion and the process location is from about 10 millimeters to about 15 millimeters.

11. (Original) The system of claim 1 wherein at least part of the base portion is porous.

12. (Original) The system of claim 1, further comprising a magnet positioned proximate to the process location to orient material deposited on a microfeature workpiece at the process location.

13. (Previously Presented) The system of claim 1 wherein the base portion includes a first surface facing toward the process location and a second surface facing opposite from the first surface, and wherein the second surface is inclined to have a higher elevation toward a perimeter of the process location than toward a center of the process location.

14. (Cancelled)

15. (Original) The system of claim 1 wherein the paddle device is movable relative to the workpiece support back and forth along a linear path.

16. (Original) The system of claim 1 wherein the workpiece support is positioned to rotate the microfeature workpiece about an axis generally normal to a face of the microfeature workpiece.

17. (Previously Presented) The system of claim 1 wherein the paddle device has a plurality of paddles with corresponding spaced apart paddle surfaces, wherein at least one of the workpiece support and the paddle device is movable back and forth along a

linear path relative to the other while the workpiece support carries a microfeature workpiece.

18. (Original) The system of claim 17 wherein the spaced apart paddle surfaces are coupled to each other to move as a unit relative to the workpiece support.

19. (Original) The system of claim 17 wherein the process location is positioned at a process plane and wherein the spaced apart paddle surfaces are inclined at an acute angle relative to the process plane.

20. (Previously Presented) The system of claim 1 wherein the at least one paddle has a first surface and a second surface facing opposite from the first surface, the first and second surfaces being canted outwardly and downwardly away from an axis positioned between the surfaces and normal to the process location, at least one of the workpiece support and the at least one paddle being movable relative to the other.

21. (Original) The system of claim 20 wherein the at least one paddle has a generally diamond shaped cross-section when intersected by a plane generally normal to the process location.

22. (Original) The system of claim 20 wherein the at least one paddle has a generally triangular cross-sectional shape when intersected by a plane generally normal to the process location.

23. (Original) The system of claim 20 wherein at least one of the first and second surfaces is curved.

24. (Previously Presented) The system of claim 1 wherein the at least one paddle includes one of a plurality of paddles.

25. (Previously Presented) The system of claim 1, further comprising a first electrode in fluid communication with the process location, and wherein the workpiece support includes a second electrode positioned to electrically couple with a microfeature workpiece when the workpiece support carries the microfeature workpiece.

26-33. (Cancelled)

34. (Previously Presented) A system for processing microfeature workpieces, comprising:

- a vessel configured to receive a processing fluid, the vessel having a process location positioned to receive a microfeature workpiece;
- a workpiece support positioned to releasably carry a microfeature workpiece at the process location of the vessel; and
- a paddle device having a plurality of paddles, with at least one of the workpiece support and the plurality of paddles being movable relative to the other along a generally linear motion axis, wherein at least a first one of the paddles is elongated along a first axis and at least a second one of the paddles is elongated along a second axis non-parallel to the first axis.

35. (Original) The system of claim 34 wherein the plurality of paddles includes a first paddle elongated along a first axis and a second paddle elongated along a second axis generally orthogonal to the first axis, and wherein the motion axis is inclined at a first acute angle relative to the first axis, the motion axis being inclined at a second acute angle relative to the second axis.

36. (Previously Presented) A system for processing microfeature workpieces, comprising:

- a vessel configured to receive a processing fluid, the vessel having a generally planar process location positioned to receive a microfeature workpiece;

- a workpiece support positioned to releasably carry a microfeature workpiece at the process location of the vessel; and
- a paddle device having a first paddle and a second paddle, with at least a portion of the second paddle being spaced apart from the first paddle, the first paddle having a first shape and size and the second paddle having a second shape and size, with the first shape being different than the second shape, or the first size being different than the second size, or both.

37. (Original) The system of claim 36 wherein the process location has an inner region positioned to be generally proximate to an inner region of the microfeature workpiece, and an outer region positioned to be generally proximate to an outer region of the microfeature workpiece, and wherein the second paddle is positioned inwardly from the first paddle, the first paddle being smaller than the second paddle.

38. (Original) The system of claim 36 wherein the first shape is geometrically similar to the second shape and wherein the first size is different than the second size.

39. (Original) The system of claim 36 wherein the workpiece support includes a generally circular seal positioned to extend around a peripheral region of the microfeature workpiece, and wherein the first paddle is elongated along an elongation axis and is positioned pass over the seal with the elongation axis generally tangent to a portion of the seal, and wherein the second paddle is positioned inwardly from the first paddle, still further wherein the first paddle is smaller than the second paddle.

40. (Previously Presented) A system for processing microfeature workpieces, comprising:

- a vessel configured to receive a processing fluid, the vessel having a generally planar process location positioned to receive a microfeature workpiece;

- a workpiece support positioned to releasably carry a microfeature workpiece at the process location of the vessel; and
- a paddle device having at least one paddle, at least one of the workpiece support and the at least one paddle being movable relative to the other along a generally linear motion axis, the at least one paddle including a generally porous material and being at least partially transmissive to the processing fluid to allow the processing fluid to pass through the at least one paddle as a result of relative motion between the at least one paddle and the workpiece support.

41. (Cancelled)

42. (Original) The system of claim 40 wherein the at least one paddle includes an electrically conductive material.

43. (Original) The system of claim 40 wherein the at least one paddle includes an electrically insulative material.

44. (Original) The system of claim 40 wherein the at least one paddle has a first surface, a second surface facing opposite from the first surface, and a plurality of highly flow-restrictive apertures extending through the at least one paddle from the first surface to the second surface.

45. (Previously Presented) A system for processing microfeature workpieces, comprising:

- a vessel configured to receive a processing fluid, the vessel having a generally planar process location positioned to receive a microfeature workpiece;
- a workpiece support positioned to releasably carry a microfeature workpiece at the process location of the vessel; and

a paddle device having at least one paddle positioned in the vessel and being movable along a generally linear motion axis relative to the process location, the at least one paddle being elongated along a paddle axis, the at least one paddle having a first shape and size at a first location along the paddle axis and a second shape and size at a second location along the paddle axis, with the first shape being different than the second shape, or the first size being different than the second size, or both.

46. (Original) The system of claim 45 wherein the first shape is geometrically similar to the second shape and wherein the first size is different than the second size.

47. (Original) The system of claim 45 wherein the at least one paddle has a first end region, a second end region spaced apart from the first end region along the paddle axis, and an intermediate region between the first and second end regions, the first and second end regions extending generally normal to the process location by a first distance, the intermediate region extending generally normal to the process location by a second distance greater than the first distance.

48-59. (Cancelled)

60. (Previously Presented) A system for processing microfeature workpieces, comprising:

- a vessel configured to carry a processing fluid, the vessel having a generally planar process location positioned to receive a microfeature workpiece;
- a workpiece support positioned to carry a microfeature workpiece at the process location of the vessel;
- a paddle chamber in fluid communication with the vessel, the paddle chamber having an opening at the process location to receive a microfeature workpiece, the paddle chamber having a base portion facing the process

location and being spaced apart from the process location by a first distance along a first axis generally normal to the process location, at least part of the base portion being porous; and

a paddle device disposed in the paddle chamber, the paddle device having at least one paddle extending for a second distance generally parallel to the first axis, the second distance being at least 30% of the first distance, and wherein at least one of the workpiece support and the at least one paddle is movable along a generally linear second axis to agitate processing fluid at the process location while the workpiece support carries a microfeature workpiece.

61. (Previously Presented) A system for processing microfeature workpieces, comprising:

a vessel configured to carry a processing fluid, the vessel having a generally planar process location positioned to receive a microfeature workpiece;

a workpiece support positioned to carry a microfeature workpiece at the process location of the vessel;

a paddle chamber in fluid communication with the vessel, the paddle chamber having an opening at the process location to receive a microfeature workpiece, the paddle chamber having a base portion facing the process location and being spaced apart from the process location by a first distance along a first axis generally normal to the process location, the paddle chamber further having a plurality of sidewall portions extending downwardly away from the process location to the base portion, and wherein the base portion includes a first surface facing toward the process location and a second surface facing opposite from the first surface, and wherein the second surface is inclined to have a higher elevation toward a perimeter of the process location than toward a center of the process location; and

a paddle device disposed in the paddle chamber, the paddle device having at least one paddle extending for a second distance generally parallel to the first axis,

the second distance being at least 30% of the first distance, and wherein at least one of the workpiece support and the at least one paddle is movable along a generally linear second axis to agitate processing fluid at the process location while the workpiece support carries a microfeature workpiece.

62. (Previously Presented) A system for processing microfeature workpieces, comprising:

- a vessel configured to receive a processing fluid, the vessel having a generally planar process location positioned to receive a microfeature workpiece;
- a workpiece support positioned to releasably carry a microfeature workpiece at the process location of the vessel; and
- a paddle device having at least one paddle, at least one of the workpiece support and the at least one paddle being movable relative to the other along a generally linear motion axis, the at least one paddle having a first surface, a second surface facing opposite from the first surface, and a plurality of highly flow-restrictive apertures extending through the at least one paddle from the first surface to the second surface, the at least one paddle being at least partially transmissive to the processing fluid to allow the processing fluid to pass through the at least one paddle as a result of relative motion between the at least one paddle and the workpiece support.